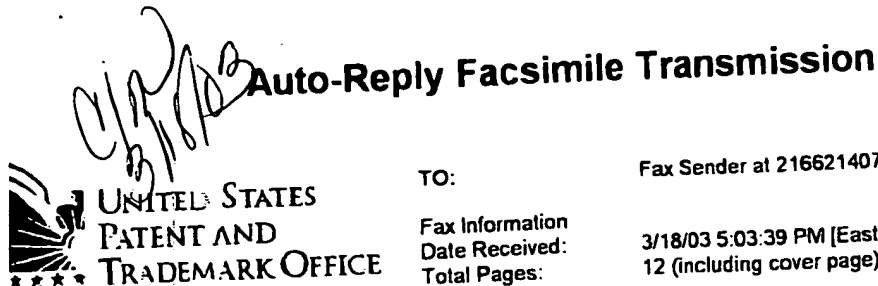


2166214072 P.02  
*15 Reg. for Record*  
*5/30/03*



TO: Fax Sender at 2166214072  
Fax Information  
Date Received: 3/18/03 5:03:39 PM [Eastern Standard Time]  
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REC-10-2003 17:28 TAROLLI SUNDHEIM COVELL 2166214072 P.02/12

TAROLLI, SUNDHEIM, COVELL, & TUMMINO L.L.P.  
ATTORNEYS AT LAW  
526 Superior Avenue, Suite 1111  
Cleveland, Ohio 44114  
Telephone: (216) 631-3234 Facsimile: (216) 631-4072

**FACSIMILE COVER SHEET**

To: MS LEO S. LUM  
Fax No.: (703) 872-9325 (703) 872-9325  
From: BARRY L. TUMMINO  
RE: U.S. McCIIRDY PATENT APPL. SERIAL  
NO. 08494,054, FILED FEBRUARY 1, 2000 FOR METHOD AND  
APPARATUS FOR CONTROLLING AN ADJUSTABLE OCCUPANT  
PROTECTION DEVICE USING AN ULTRASONIC SENSOR, ATTY.  
DOCKET NO. TRW(TM)170  
Date: March 18, 2003

Please find attached an Amendment or Response After Final Rejection  
Transmitted (4 pgs.); and a Request for Reconsideration (7 pgs.)

**TO: 703-308-2571**

*Examiner Lum,*  
*As per our conversation, here is a*  
*Retransmission of my earlier Fax*  
*B. Tummino*

NUMBER OF PAGES FOLLOWING THIS COVER SHEET 11

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**GROUP 3800**

*Record*  
*5/30/03*

14 pages

*Retransmission of Fax*  
*B. Tummino*  
*4/21/03*  
*Reg No 29,709*

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-TAROLLI SUNDHEIM COVELL -

\*\*\*\*\* -TAROLLI SUNDHEIM- \*\*\*\*\* 2166214072- \*\*\*\*\*

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**FACSIMILE COVER SHEET**

To: MS LEE S. LUM

Fax No.: (703) 872-9928 (703) 872-9325

From: BARRY L. TUMMINO

RE: U.S. McCURDY PATENT APPLN. SERIAL  
NO. 09/494,954, FILED FEBRUARY 1, 2000 FOR METHOD AND  
APPARATUS FOR CONTROLLING AN ACTUATABLE OCCUPANT  
PROTECTION DEVICE USING AN ULTRASONIC SENSOR, ATTY.  
DOCKET NO. TRW(TE)4170

Date: March 18, 2003

Please find attached an Amendment or Response After Final Rejection  
Transmittal (4 pgs.); and a Request for Reconsideration (7 pgs.)

NUMBER OF PAGES FOLLOWING THIS COVER SHEET 11**NOTICE**

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Practitioner's Docket No. TRW(TE)4170

PATENT

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Roger A. McCurdy

Application No.: 09/494,954

Group No.: 3611

Filed: February 1, 2000

Examiner: Lee S. Lum

For: METHOD AND APPARATUS FOR CONTROLLING AN ACTUATABLE  
OCCUPANT PROTECTION DEVICE USING AN ULTRASONIC SENSOROK  
PLS ENTER  
4/23/03

**RESPONSE UNDER  
37 C.F.R. § 1.116  
EXPEDITED PROCEDURE  
EXAMINING GROUP**

BOX AF  
Assistant Commissioner for Patents  
Washington, D.C. 20231

NOTE: To take advantage of the expedited procedure the envelope in which this paper is mailed must be addressed as shown and must also be marked "Box AF" in the lower left hand corner. Alternatively, this paper can be hand carried to the particular Examining Group or other area of the Office in which the application is pending, in which case any envelope in which this paper is placed must be marked as in the bold type box above. Notice of Sept. 20, 1985 (1059 O.G. 19-20). See M.P.E.P. § 714.13, 6th ed., rev. 3.

## AMENDMENT OR RESPONSE AFTER FINAL REJECTION-TRANSMITTAL

1. Transmitted herewith is an amendment after final rejection (37 C.F.R. § 1.116) for this application.

**CERTIFICATE OF MAILING/TRANSMISSION 37 CFR 1.8(a) and 1.10\***  
(When using Express Mail, the Express Mail label number is mandatory;  
Express Mail Certification is optional.)

I hereby certify that, on the date shown below, this correspondence is being:

## MAILING

- ☐ deposited with the United States Postal Service in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.  
37 C.F.R. § 1.8(a)
- ☐ with sufficient postage as first class mail. ☐ as "Express Mail Post Office to Addressee" Mailing Label No. \_\_\_\_\_ (mandatory)

## TRANSMISSION

- ☒ transmitted by facsimile to the Patent and Trademark Office.

Signature

Anita J. Galo

(type or print name of person certifying)

Date: March 18, 2003

\*WARNING: Each paper or fee filed by Express Mail must have the number of the "Express Mail" mailing label placed thereon prior to mailing. 37 C.F.R. § 1.10(b).  
\*Since the filing of correspondence under § 1.10 without the Express Mail mailing label thereon is an oversight that can be avoided by the exercise of reasonable care, requests for waiver of this requirement will not be granted on petition." Notice of Oct. 24, 1996, 60 Fed. Reg. 56,439, at 56,442.

**NOTE:** *Response to Final Rejection—Avoiding Extension Fees* "In patent applications wherein a three month Shortened Statutory Period (SSP) is set for response to a Final Rejection, the response would best be filed within two months of the date of the Office Action. If filed within two months, any Advisory Action mailed after the SSP expires will reset the SSP to expire on the date of the Advisory Action for extension fee purposes, but never more than six months from the date of the Final Rejection." Notice of Nov. 30, 1990 (1122 O.G. 571 to 591). See M.P.E.P. § 714.13, 6th ed., rev. 3.

### STATUS

2. Applicant is
- ☐ a small entity. A statement:
- ☐ is attached.
- ☐ was already filed.
- ☒ other than a small entity.

### EXTENSION OF TERM

**NOTE:** *As to a Supplemental Amendment filed in response to a final office action, the Notice of December 10, 1985 (1061 O.G. 34-35) states:*

*"If a timely response has been filed after a Final Office Action, an extension of time is required to permit filing and/or entry of a Notice of Appeal or filing and/or entry of an additional amendment after expiration of the shortened statutory period unless the timely-filed response placed the application in condition for allowance. Of course, if a Notice of Appeal has been filed within the shortened statutory period, the period has ceased to run."*

3. *(complete (a) or (b), as applicable)*
- (a) ☐ Applicant petitions for an extension of time under 37 C.F.R. § 1.136 (fees: 37 C.F.R. § 1.17(1)-(4) for the total number of months check below:

Extension (months)	Fee for other than small entity	Fee for small entity
<input type="checkbox"/> one month	\$ 110.00	\$ 55.00
<input type="checkbox"/> two months	\$ 400.00	\$200.00
<input type="checkbox"/> three months	\$ 920.00	\$460.00
<input type="checkbox"/> four months	1,440.00	\$720.00

Fee \$ \_\_\_\_\_

If an additional extension of time is required, please consider this a petition therefor.

*(check and complete the next time, if applicable)*

- ☐ An extension for \_\_\_\_\_ months has already been secured and the fee paid therefor of \$ \_\_\_\_\_ is deducted from the total fee due for the total months of extension now requested.

Extension fee due with this request \$ \_\_\_\_\_

OR

- (b) ☒ Applicant believes that no extension of term is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition for extension of time.

**FEE F R CLAIMS**

4. The fee for claims (37 C.F.R. § 1.16(b)-d)) has been calculated as shown below:

(Col. 1)	(Col. 2)	(Col. 3)	SMALL ENTITY			OTHER THAN A SMALL ENTITY		
CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NO. PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE	ADDIT. FEE .	OR	RATE	ADDIT. FEE	
TOTAL *22 MINUS ** 22	=0	X\$ 9=	\$			X\$ 18=	\$0.00	
INDEP. * 5 MINUS *** 5	=0	X\$ 42=	\$			X\$ 84=	\$0.00	
<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEP. CLAIM	=0	X\$140=	\$			X\$280=	\$0.00	
				TOTAL ADDIT. FEE	\$	OR	TOTAL ADDIT. FEE	\$0.00

- \* If the entry in Col. 1 is less than entry in Col. 2, write "0" in Col. 3.  
 \*\* If the "Highest No. Previously Paid For" IN THIS SPACE is less than 20, enter "20".  
 \*\*\* If the "Highest No. Previously Paid For" IN THIS SPACE is less than 3, enter "3".  
 The "Highest No. Previously Paid For" (Total or Indep.) is the highest number found in the appropriate box in Col. 1 of a prior amendment or the number of claims originally filed.

**WARNING** See 37 C.F.R. § 1.116.

(complete (c) or (d), as applicable)

- (c) ☒ No additional fee for claims is required.

OR

- (d) ☐ Total additional fee for claims required \$ \_\_\_\_\_

**FEE PAYMENT**

5. ☐ Attached is a ☐ check ☐ money order in the amount of \$ \_\_\_\_\_  
☒ Authorization is hereby made to charge the amount of \$0.00  
☒ to Deposit Account No. 20-0090.  
☐ to Credit card as shown on the attached credit card information authorization form PTO-2038.

**WARNING:** Credit card information should not be included on this form as it may become public.

- ☒ Charge any additional fees required by this paper or credit any overpayment in the manner authorized above.

A duplicate of this paper is attached..

**FEE DEFICIENCY**

**NOTE:** *If there is a fee deficiency and there is no authorization to charge an account, additional fees are Necessary to cover the additional time consumed in making up the original deficiency. If the maximum, six-month period has expired before the deficiency is noted and corrected, the application is held abandoned. In those instances where authorization to charge is included, processing delays are encountered in returning the papers to the PTO Finance Branch in order to apply these charges prior to action on the cases. Authorization to charge the deposit account for any fee deficiency should be checked. See the Notice of April 7, 1986 (1065 O.G. 31-33).*

6. ☒ If any additional extension and/or fee is required, charge Account No. 20-0090.

**AND/OR**

- ☒ If any additional fee for claims is required, charge Account No. 20-0090.

Barry L. Tummino  
SIGNATURE OF ATTORNEY

Barry L. Tummino  
(type or print name of attorney)

Reg. No.: 29,709

Tel. No.: (216) 621-2234

Customer No.:

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P.O. Address  
26,294

**PATENT**

I HEREBY CERTIFY THAT THIS CORRESPONDENCE IS  
BEING FACSIMILE TRANSMITTED TO: ASSISTANT  
COMMISSIONER FOR PATENTS, WASHINGTON, D.C.  
20231, ON

March 18, 2003  
Amato J. Malo 03/18/03  
SIGNATURE DATE

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant : Roger A McCurdy  
Serial No. : 09/494,954  
Filing Date : February 1, 2000  
For : METHOD AND APPARATUS FOR  
CONTROLLING AN ACTUATABLE  
OCCUPANT PROTECTION DEVICE  
USING AN ULTRASONIC SENSOR  
Group Art Unit : 3611  
Examiner : Lee S. Lum  
Attorney Docket No. : TRW(TE)4170  
Assistant Commissioner for Patents  
Washington, D.C. 20231

**REQUEST FOR RECONSIDERATION AFTER FINAL**

Sir:

In response to the Office Action dated December 23, 2002,  
reconsideration of the above-identified patent application in  
view of the following remarks is respectfully requested.

A. **SUMMARY OF INTERVIEW OF DECEMBER 12, 2002**

The Office Action of December 23, 2002 included an  
interview summary of a December 12, 2002 interview between  
Examiner Lum and the undersigned. The Examiner's Interview  
Summary correctly states that the prior art discussed included  
Ross and Thompson. However, it is respectfully submitted that  
no discussion took place concerning the use of Thompson as  
prior art per se. During the interview, Examiner Lum and the  
undersigned discussed that the rejection of claims under 35

Serial No. 09/494,954

U.S.C. §103 over a combination of Thompson and Ross was improper because Ross and the present invention were commonly owned, i.e., Ross is not available as a reference under §103.

**B. FINALITY OF THE OFFICE ACTION IS PREMATURE**

In the current Office Action, claims 1-4, 10, 14, 17, and 22 were finally rejected as being anticipated by Ross under 35 U.S.C. 102(e). In the prior Office Action dated May 17, 2002, claims 1-4, 10, 14, 17, and 22 were rejected as being anticipated by Ross under 35 U.S.C. 102(b). In making the current rejection final, the Office Action states, "Applicant's amendment necessitated the new ground(s) of rejection presented in this Office Action." It is respectfully submitted that this is incorrect and the finality of the rejection is improper.

The rejection of the claims under 35 U.S.C. §102(b) had to be withdrawn, not because of Applicant's amendment, but because the rejection was improper, i.e., Ross is not a reference under §102(b). Thus, the improper rejection (the §102(b) rejection) of the claims necessitated the new ground of rejection. Since the rejection under 35 U.S.C. §102(b) was improper, amendment of the claims for the furtherance of prosecution did not necessitate the new grounds for rejection. Prior to any amendment of the claims, new grounds for any subsequent rejection was required due to the improper rejection of the claims under §102(b). Therefore, it is respectfully requested that the finality of the current Office Action be withdrawn thus permitting applicant an opportunity to respond to the new rejection.



Serial No. 09/494,954

C. ROSS FAILS TO ANTICIPATE CLAIMS 1-4, 10, 14, 17 AND 22

Anticipation requires a single prior art reference that discloses each element of the claim. W.L. Gore & Associates v. Garlock, Inc., 220 USPQ 303, 313 (Fed. Cir. 1983) cert. denied 469 U.S. 851 (1984). For a reference to anticipate a claim, "[t]here must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention." Scripps Clinic & Research Foundation v. Genentech Inc., 18 USPQ2d 1001, 1010 (Fed. Cir. 1991). It is respectfully suggested that Ross fails to teach or suggest each feature of claim 1-4, 10, 14, 17, and 22.

Ross teaches a passenger restraint system 10 for a vehicle that includes a low frequency accelerometer circuit 12 and a series of high frequency pressure transducers 16 (Ross, Col. 3, line 60 to Col. 4, line 6). The high frequency pressure transducers 16 sense high frequency signals that are generated as a result of metal being deformed during a crash event (Ross, Col. 4, lines 2-6). The high frequency pressure transducers 16 provide an indication of crash severity (Ross, Col. 4, lines 1-26, and Col. 4, lines 49-59). It is further stated that the high frequency pressure transducers cannot provide adequate directional information of the crash event (Ross, Col. 2, lines 30-35).

The low frequency accelerometer circuit 12 of Ross provides directional information about the crash event (Ross, Col. 4, lines 59-62). According to the specification, the low frequency accelerometer circuit 12 provides directional

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information about the crash event more quickly than providing a reliable indication of crash intensity (Ross, Col. 4, line 66-Col. 5, line 3). Thus, Ross teaches a microprocessor 22 that determines whether to deploy an air bag in response to crash intensity information from the high frequency pressure transducers 16 and directional information from the low frequency accelerometer circuit 12 (Ross, Col. 4, line 66 to Col. 5, line 6). As a result of using the high frequency pressure transducers 16 for intensity and the low frequency accelerometer circuit 12 for direction, the microprocessor 22, according to Ross, makes a deployment determination quicker than if the accelerometer circuit 12, alone, was used for both direction and intensity in a deployment determination (Ross, Col. 5, lines 3-6). In effect, Ross makes a single deployment determination based on input data from two sensors. It does not make two separate deployment determinations.

Each of claims 1, 10, 14, 17, and 22 in the present application includes an acoustic safing sensor. Each of claims 1-4, 10, 14, 17 and 22 also includes a controller for controlling actuation of an occupant protection device in response to signals from both the crash sensor and the safing sensor separately indicating the occurrence of a deployment crash event. In effect, the presently claimed invention makes two separate determinations of a deployment crash event and then, controls deployment when both indicate a deployment crash event. Ross fails to teach or suggest these features recited in the claimed invention.

Serial No. 09/494,954

The term "safing sensor" is a term of art. A safing sensor operates separately and independently from the vehicle discrimination crash sensor. The safing sensor output is used to determine whether a deployment condition has occurred. The determination using the safing sensor signal is input to an ANDing function. A determination using the discrimination crash sensor signal is also input to the ANDing function. The vehicle occupant protection device is only deployed if both the vehicle crash sensor and the safing sensor, separately and independently, indicate a deployment condition has occurred. Thus, deployment of the vehicle occupant protection device only occurs when the ANDing function receives both determinations of a deployment condition from both the vehicle crash sensor and the acoustic safing sensor.

Thus, it is respectfully submitted that Ross fails to teach or suggest an acoustic safing sensor. Therefore, it is respectfully suggested that the rejection of claims 1-4, 10, 14, 17, and 22 is improper and should be withdrawn.

Moreover, it is respectfully suggested that Ross fails to teach or suggest a controller as defined in claims 1-4, 10, 14, 17, and 22. The claimed controller is responsive to the signal from the crash sensor to determine whether a deployment crash event has occurred. The controller is separately responsive to the signal from the safing sensor to determine whether a deployment crash event has occurred. The controller controls actuation of the occupant protection device in response to both determinations.

Serial No. 09/494,954

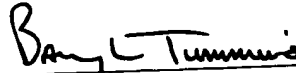
Ross specifically teaches combining signal portions from a low frequency accelerometer circuit 12 (i.e., direction of crash) and from a high frequency pressure transducer 16 (i.e., intensity of crash) to make a single determination of a deployment crash event. Thus, the microprocessor 22 of Ross does not control actuation of the occupant protection device in response to both a crash signal and a safing signal separately indicating the occurrence of a crash event. Ross uses two signals for a single determination of the occurrence of a crash event. Signal portions from the low frequency accelerometer circuit 12 and from high frequency pressure transducers 16 are used in the single determination. Thus, it is respectfully suggested that Ross fails to teach or suggest the controller of claims 1-4, 10, 14, 17 and 22. Therefore, for this further reason, it is respectfully suggested that the rejection of claims 1-4, 10, 14, 17 and 22 is improper and should be withdrawn.

In view of the foregoing, it is respectfully submitted that the above-identified patent application is in condition for allowance, and allowance of the above-identified patent application is respectfully requested.

Serial No. 09/494,954

Please charge any deficiency or credit any overpayment in  
the fees for this amendment to our Deposit Account  
No. 20-0090.

Respectfully submitted,



Barry L. Tummino  
Reg. No. 29,709  
Customer No.: 26,294

TAROLLI, SUNDHEIM, COVELL,  
& TUMMINO L.L.P.  
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